

ABSTRACT OF THE DISCLOSURE

In a confocal microscope according to the invention, the beam of light from light source is lead to rotary disk by way of optical lens and half mirror and made to strike specimen by way of objective lens. The rotary disk has random pin hole pattern sections where pin holes are randomly bored through a light blocking mask and an aperture section having an area  $k^2$  times greater than the area of the random pin hole pattern sections and allowing any light to pass therethrough. The beam of light reflected by the specimen is made to enter CCD camera by way of the objective lens, the rotary disk, the half mirror and condenser lens. The CCD camera is adapted to selectively pick up a composite image containing a confocal image component and a non-confocal image component of the specimen obtained through the random pin hole pattern sections and a conventional image of the specimen obtained through the aperture section. Then, CPU carries out an arithmetic operation of subtracting the conventional image data from the composite image data by means of a difference program to produce a confocal image of the specimen.

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